3.7 Fisheries

3.7.1 Existing Conditions

Existing documentation and information from the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and Washington's Priority Habitats and Species (PHS) program were used to determine if special-status fish species could be present near the project site, pipeline routes, and transmission line corridor. Aquatic resources in the project area were evaluated using published and unpublished literature, contacts with agency personnel, and a site reconnaissance. Although listed fish species occur in the general vicinity of the project, none are found on the generation plant site or along the pipelines. However, the transmission line right-of-way would cross the Walla Walla River, creeks, irrigation canals, various ponds, and wetlands some of which contain habitat for aquatic species.

Listed chinook salmon, sockeye salmon, and steelhead migrate or rear for short periods in Lake Wallula and adjacent waters, as shown in Table 3.7-1. Listed salmon migrating past the site in the Columbia River include Snake River fall-run and spring/summer-run chinook salmon, the upper Columbia River spring-run chinook salmon, the Snake River sockeye salmon, middle Columbia River steelhead, the Snake River Basin steelhead, and the upper Columbia River steelhead.

Columbia River bull trout are found in the upper reaches of the Walla Walla River and in several tributaries of the Snake River, but have never been reported in reaches of the Columbia River near the project area or between the mouths of the Snake and Walla Walla Rivers (USFWS 2000 as cited in Wallula Generation 2001). Bull trout have been recorded by the USFWS as far downstream as 5-Mile Bridge on the Walla Walla River (upstream of the City of Walla Walla). Although they can migrate downriver and become acclimated to lake environments, they are not usually found near the mouth of the Walla Walla River. (Wallula Generation 2001.)

According to WDFW (2000), the former range of margined sculpin is unknown. Margined sculpins are currently found in the Blue Mountains of Oregon and Washington. In Washington, margined sculpin are found only in parts of the Tucannon and Walla Walla river drainages and have not been reported in Lake Wallula or the immediate project vicinity. (Wallula Generation 2001.)

Table 3.7-1. Summary of Threatened, Endangered, and Species of Concern Fish for the Project Vicinity and Nearby Waters

Common Name	Scientific Name	Federal Status	State Status
Bull Trout - Columbia River Distinct Population Segment (DPS)	*Salvelinus confluentus*	T	C
Chinook Salmon - Snake River Fall-Run Evolutionarily Significant Unit (ESU)	*Oncorhynchus tshawytscha*	T	C
Chinook Salmon - Snake River Spring/Summer-Run ESU	*Oncorhynchus tshawytscha*	T	C
Chinook Salmon - Upper Columbia River Spring-Run ESU	*Oncorhynchus tshawytscha*	E	C
Sockeye Salmon - Snake River ESU	*Oncorhynchus nerka*	E	C
Steelhead - Middle Columbia River ESU	*Oncorhynchus mykiss*	T	C
Steelhead - Snake River Basin ESU	*Oncorhynchus mykiss*	T	C
Steelhead - Upper Columbia River ESU	*Oncorhynchus mykiss*	E	C
Margined Sculpin	*Cottus marginatus*	SC	S
Leopard Dace	*Rhinoichthys falcatus*	SC	C
White Sturgeon	*Acipenser transmontanus*	SC	C
River Lamprey	*Lampetra ayresi*	SC	C
Pacific Lamprey	*Entosphenus tridentatus*	SC	
Westslope Cutthroat Trout	*Oncorhynchus clarki lewisi*	SC	
Interior Redband Trout	*Oncorhynchus mykiss gairdneri*	SC	C

Federal Status Codes
E = Endangered
T = Threatened
C = Candidate
SC = Species of Concern
PT = Proposed Threatened
PE = Proposed Endangered

State Status Codes
E = Endangered
T = Threatened
S = Sensitive
C = Candidate
Blank = no status

Data from StreamNet 2001, USFWS 1996, WDFW 2001a, WDFW 2001b, and Wright pers. comm.

3.7.1.1 Generation Plant

The project site is located 800 feet east of the Columbia River and 4.5 miles north of the Walla Walla River. There is no direct connection of surface waters or runoff from the project site to the Columbia River or the Walla Walla River.

There are no natural surface waters bodies on or immediately adjacent to the project site. There are, however, six wetlands and two irrigation ponds (wetland B, C, D, F, G, and H and pond A and E) (see Figure 3.4-1 in Section 3.4, Wetlands and Vegetation). Seven of the eight wet areas (all but wetland F) are manmade and have been excavated in upland soils for irrigation purposes. Only ponds A and E are considered nonjurisdictional under Ecology recommendations and therefore, are not regulated or protected.

Field surveys during the irrigation season identified sunfishes, minnows, and sculpins within some of the on-site ponds. These fish were likely entrained in unscreened irrigation water pumped from Casey Slough in Lake Wallula (the impoundment of the Columbia River behind the McNary Dam). Fish-eating birds prey upon fish from these ponds, especially when pond water levels are low. Only ponds C, D, and H are considered capable of supporting warmwater fish species year-round. Irrigation pond A

is the main irrigation pond located in the northwest corner of the project site, which only has water flow during the irrigation season. Fish have been noted in this pond, but are killed by predation and desiccation as the pond dries up after the pumping of irrigation water has ceased. Pond B, located in the southwest corner, does not support fish and as soon as the pumping of irrigation water has stopped, the pond dries up in a matter of days. Ponds C, D and H are located along the west side of the project site; fish have been noted in these wetland areas. Fish mortality is high in all ponds due to bird predation and intermittent dewatering of the ponds.

The following summarizes information relating to fish in the on-site ponds that could be affected by the proposed project (pond E and wetlands F and G would not be impacted by the project).

Pond A

- Fish are not and never have been self sustaining in pond A.
- Fish originate from Casey Slough, due to operation of the Columbia Basin Irrigation Project, which incidentally entrains and transports fish downstream into lateral canals and impoundments, such as pond A.

Wetland B

- Wetland B does not sustain fish species due to its small size, the presence of foraging birds at nearby ponds, and its dewatering once irrigation stops. No fish have been observed during field surveys.

Wetlands C, D, and H

- Wetlands C, D, and H are perennial.
- Water quality parameters (e.g., temperature, pH, dissolved oxygen, etc.) sampled in wetlands C and D during a January 3, 2001 project site visit are within ranges that can sustain regional warmwater fish species.
- Wetlands C, D, and H have habitat structure (e.g., sunken woody debris, riparian cover, etc.) that is adequate for supporting fish species.

The presence of federal threatened and endangered fish species or state-listed sensitive fish species in the irrigation ponds was not documented during fish surveys. However, there is potential that entrainment of these species could occur given the lack of screening on the irrigation pumps pumping the water from Casey Slough to pond A. The unscreened pump and irrigation canals represent the only direct connection from the Columbia River to the project site and immediately adjacent properties.

3.7.1.2 Water Supply Pipeline

Fish habitats are not present within the proposed makeup water supply pipeline right-of-way. Other than several manmade ponds used for irrigation purposes and one ephemeral drainage along the pipeline, there are no surface waters along the pipeline. There is no

direct connection of surface waters or runoff from the pipeline laterals to the Columbia River or the Walla Walla River.

3.7.1.3 Transmission Line and Associated Facilities

The transmission line right-of-way lies in southeast Washington and northeast Oregon, a semiarid region with relatively few aquatic habitats along the right-of-way. However, 10 locations were identified as having the potential to provide fish habitat during at least part of the year (Table 3.7-2). Potential habitat includes locations downstream of a drainage that could be impacted by increased sediment load.

There are no fisheries resources along the proposed Wallula-Smiths Harbor segment. The right-of-way would span relatively near wetland F (Smayda Environmental 2000) in the general vicinity of the proposed Wallula Power Project, but would not be close enough to impact any habitat associated with this feature. There is also a lagoon north of the proposed transmission line, directly east from the Wallula Power Project. This area is a manmade water body created to store or convey irrigation water or site drainage water (Smayda Environmental 2000) and is not a productive fisheries habitat.

The 10 locations with the potential to provide fisheries habitat during at least part of the year along the right-of-way are discussed below.

Table 3.7-2 Potential Fisheries Habitat Locations along the Right-of-Way

Location Number	Location Name	Right-of-Way Mile Post[1]	State
1	Walla Walla River	1.5	Washington
2	U.S. Highway 12 drainage	2.0	Washington
3	Juniper Canyon	10.25	Oregon
4	McNary irrigation canal	24.75	Oregon
5	Wanaket Wildlife area	24.0	Oregon
6	Spring Gulch	5.5	Oregon
7	Unnamed stream and marsh area near U.S. Highway 730	19.25	Oregon
8	Cold Springs wash	20.25	Oregon
9	Unnamed stream #2	20.5	Oregon
10	Wetland adjacent to U.S. Highway 395	28.25	Oregon

[1] All mile markers are measured from the Smiths Harbor Switchyard, moving west toward the McNary Substation. All measurements were done on a USGS 1:24,000 map.
Source: Information provided by Bonneville.

Walla Walla River (Location 1)

The Walla Walla River is the most significant fishery habitat in the project area and supports several anadromous and resident fish species including several federal and state sensitive species. The habitat was examined in the field at two potential transmission line crossing locations, both west and east of the existing transmission line. Aquatic habitats at both potential crossing locations are similar; however, the west side riparian area is more continuous in nature. Here the Walla Walla River is relatively deep, wide (approximately 150 feet), and slow moving with a very low gradient (less than 1%). The

floodplain and associated riparian area are about 200 and 1,400 feet wide on the north and south sides, respectively, and consist of willow, cottonwood, and marsh vegetation. The Walla Walla River in this area has a steep cutbank with large wood pieces sparsely distributed in the water. The sediment is silt and sand. This part of the Walla Walla River would not likely be suitable for salmonid spawning but would provide some rearing and certainly migration habitat.

U.S. Highway 12 Drainage (Location 2)

This ephemeral drainage crosses U.S. Highway 12 and drains to the Walla Walla River floodplain near the existing right-of-way. It would only carry water during a rain event or snowmelt. It was dry during the field visit, with no indication (i.e., vegetation) of any significant sustained flow during any part of the year.

Juniper Canyon (Location 3)

Juniper Canyon aquatic habitat is located on the canyon floor about 700 feet below the plateau where the right-of-way would be constructed. During the field visit, the stream was approximately 1 foot deep, with a wetted width of about 3 feet and a flow of about 0.2 cubic feet per second (cfs). Substrate in the stream bottom is a combination of cobble and gravel with some sand and silt. The stream supports a relatively well-established riparian area of freshwater marsh vegetation approximately 10 feet wide. Although no fish were seen, it is likely that the stream supports resident fish.

McNary Irrigation Canal (Location 4)

The McNary Irrigation Canal is lined with concrete in places, and was about 10 feet wide and 1 or 2 feet deep during the field survey. There is essentially no riparian habitat and no overhead or instream cover for fish. However, it could potentially support fish when water is supplied through pumping from the Columbia River. It is likely that flow in this canal is generally controlled by irrigation pumping; it is not known if there are screens on the pump intakes.

Wanaket Wildlife Area (Location 5)

The Wanaket Wildlife Area, also referred to as the McNary Potholes, is part of the 2,817-acre parcel managed by the CTUIR and Bonneville. The McNary Pothole area is an outwash plain that is maintained as a wetland area through the use of local irrigation water. There are six potholes in the vicinity of the transmission line right-of-way which range from larger ponds with open water to nearly dry depressions filled with organic debris. These are parts of a 160-acre emergent wetland system within the Wanaket Wildlife Area, which includes about 14 acres of open water habitat (CTUIR and Bonneville 2001).

Four of the potentially impacted potholes (potholes 1, 2, 3, and 6) are about 3 to 4 acres in size with relatively wide riparian areas. There is considerable open water habitat

associated with these potholes that is approximately 4 feet in depth and most likely supports warmwater fish species. There are carp and mosquito fish documented in the area, but no efforts have been made to stock the potholes with game fish. The irrigation system that provides water to the potholes from the Columbia River is screened (CTUIR and Bonneville 2001). The other two potholes are much smaller, with one about 1,500 square feet with a small shallow water area and one that was described as a damp depression during the field surveys.

Spring Gulch (Location 6)

Spring Gulch drains into the Columbia River floodplain 2 miles downstream of the transmission line right-of-way. It is a gully that would only carry water during a rain event or snowmelt. It was dry during the field visit with sagebrush covering much of the streambed; there was no indication of any significant sustained flow during any part of the year. The steep gradient and general lack of flow between the transmission line right-of-way crossing and the Columbia River would most likely prevent access to this area by fish from the Columbia River.

Marsh Area near State Highway 207 (Location 7)

This marsh area has a small pond that is formed by a dammed gully. It is likely that the pond is maintained by the local irrigation activities. There was no flowing water leaving the pond during the field survey, although there is wetland vegetation below the pond. The pond is about 1 acre in size and is surrounded by emergent aquatic vegetation. It is likely that warmwater species could inhabit the pond. Fish access to the pond from downstream does not appear possible.

Cold Springs Wash (Location 8)

Cold Springs Wash parallels State Highway 207 and is routed into an irrigation canal near the transmission line right-of-way crossing. The irrigation canal was about 10 feet wide and approximately 4 feet deep at the time of the field visit, and could support warmwater fish during the irrigation season. Without irrigation water, it likely goes dry. The canal is lined in some areas, otherwise the substrate is sand and silt. The canal has some instream and overhead cover. The wash connects to the Columbia River about 2 to 3 miles downstream.

Unnamed Canal (Location 9)

This irrigation canal was about 15 feet wide and 1 or 2 feet deep during the field survey. There is riparian vegetation associated with this canal and it could support fish during the irrigation season. It appeared that this canal is connected to the canal in Cold Springs Wash, described above (Location 8).

Power City Wildlife Area (Location 10)

This wetland next to U.S. Highway 395 is referred to as the Power City Wildlife Area. Like other wetlands in the area, the Power City Wildlife Area is sustained by irrigation water. An irrigation ditch that runs through the area is thought to increase the wetland area by as much as 90% (Baley pers. comm.). Fishing occurs in the wetland, apparently for warmwater species such as catfish, largemouth bass, brown bullhead, bluegill, and white crappie (ODFW 2001). The fish and water in the wildlife area likely originate from the Cold Springs Reservoir.

3.7.1.4 Natural Gas Pipeline

As discussed for the water pipeline, fish habitats are not present within the natural gas pipeline right-of-way.

3.7.2 Impacts of the Proposed Action

3.7.2.1 Construction

Generation Plant

Pond A would be cleared and leveled, irrigation pumps would be disconnected and removed, and the pond would be permanently dewatered. Impacts to fish and fish habitat would be similar to the normal seasonal dewatering of the pond. Fish populations are not self sustaining due to predation, dewatering, and desiccation as the pond dries up once irrigation water has ceased. The pond does not support listed fish species. Any fish that reach the pond are entrained and pumped into the ponds due to the lack of screening at the pump intakes. In the longer term, the cessation of unscreened pumping from the Columbia River would reduce mortality associated with entrainment to the pond and subsequent drying of the pond. Pond E on the adjacent property to the north would not be directly affected by construction activities and 100-foot buffers would be implemented around the remaining wetlands.

In all the ponds, the resulting impacts to fish and fish habitat due to lack of irrigation water would be no different than that which happens at the end of each irrigation season when the ponds are usually dewatered.

Mitigation measures proposed at the project site and pipelines include the use of BMPs during construction and off-site mitigation for loss of valuable habitats. Examples of some specific mitigation measures that would protect or benefit fish and fish habitat are listed below.

- When working within or adjacent to any drainage ditch, watercourse, ravine, etc., the construction contractor would have an emergency spill containment kit to contain and remove any accidentally spilled fuels, hydraulic fluids, etc.

- Equipment refueling and storage of fuels and hydraulic fluids or any other toxic or deleterious materials would not occur within 100 feet of surface water.
- The washing of construction equipment, use of herbicides or disposal of other waste materials would not occur within 100 feet of any drainage ditch, watercourse, ravine, etc.
- Riparian habitats along the Walla Walla River would be enhanced via purchase and transfer of water rights and the planting of 145 acres with native trees.

Water Supply Pipeline

There are no fish habitats within or adjacent to the proposed pipeline, hence, no impacts to fish would result from its construction. Other than several manmade ponds used for irrigation purposes and one ephemeral drainage along the pipeline laterals, there are no surface waters along the pipeline laterals. There is no direct connection of surface waters or runoff from the pipeline laterals to the Columbia River or the Walla Walla River.

Transmission Line and Associated Facilities

The following measures have been included to minimize impacts to fish and fish habitat.

- To the extent possible, new road building within or adjacent to wetlands would be avoided.
- Structures and roads would be sited to avoid sensitive areas, steep slopes, and erosion prone areas. Sediment and erosion control methods would be implemented and the clearing of riparian vegetation would be minimized.
- Access roads would be designed to minimize the potential for erosion. Construction of steep, straight road sections resulting in channelization and concentration of runoff would be avoided.
- To avoid impacts to fish from vegetation management, maintenance of the transmission line right-of-way would comply with the standards and guidelines established in the Record of Decision for vegetation management (Bonneville 2000).
- A spill prevention and contingency plan would be developed and implemented prior to the start of construction to minimize the potential for spills of hazardous materials. The plan would include provisions for storage of hazardous materials and refueling of construction equipment outside of riparian zones, a spill containment and recovery plan, and notification and activation protocols.

The staging of equipment and material and the construction of transmission lines, structures, and access roads have the potential to impact fish habitat by disturbing stream beds and banks, removing riparian vegetation, and increasing stormwater runoff from disturbed upland sites and roads. There is no anticipated removal of trees from riparian zones that could result in reduced shading, organic input, and increased sedimentation to the stream. Direct disturbance of streams would mostly be avoided by spanning these areas. The installation of one large culvert into a streambed with associated placement of

fill would directly disturb the unnamed stream east of Highway 207. All temporary and permanent culverts installed as part of this project would be designed to facilitate fish passage. No impacts to fish passage are anticipated.

Tree and vegetation removal would be minimal within the transmission line and access road rights-of-way. Vegetation clearing could result in a temporary, minor increase in hillslope erosion and sedimentation into streams. However, nearly all right-of-way construction would occur outside riparian buffers of stream, and BMPs would be implemented to minimize sediment transport to streams from the right-of-way (see Appendix A and the mitigation section of Section 3.3, Water Resources).

Construction of access roads has a higher potential to impact fish habitat than the other construction activities because roads are more permanent erosion sources. Access road alternatives have been evaluated to minimize potential impacts to fish habitat (e.g., water quality degradation, removal of riparian vegetation, and habitat degradation from stream crossings). Several measures would be taken to avoid or minimize potential impacts to fish habitat from access road construction and road use: implementing construction BMPs to protect water quality; minimizing construction activities on steep or unstable slopes; eliminating the construction and use of fords during construction; using temporary or permanent culverts where required; and moving or avoiding existing access roads or crossings with known erosion problems. In addition, existing roads would be improved to remedy potential erosion problems prior to construction.

The locations of access roads, transmission line tower footings, and construction staging areas are not known due to the early stages of the transmission line right-of-way design. However, general mitigation measures have been developed to minimize the potential impacts on fish and fish habitat. These mitigation measures are to be incorporated into the design phases and during transmission line construction. In addition, mitigation measures and impacts would be further detailed and refined as the design phase proceeds and prior to construction.

The Walla Walla River (Location 1) is by far the best aquatic habitat for fish and is occupied by threatened, endangered, and sensitive species. Most impact would be avoided through keeping construction activities out of the water and timing activities to avoid important fish life history stages. Impacts are expected to be low because disturbance of the riparian areas would be minimized through BMPs and mitigation measures.

The Wanaket and Power City Wildlife Areas (Locations 5 and 10, respectively) would incur low levels of impacts, because any disturbed riparian areas are to be avoided or minimized through BMPs and mitigation measures.

The remaining seven areas that have potential to incur impacts from construction (Locations 2, 3, 4, 6, 7, 8, and 9) would likely have low or no impacts associated with construction activities. All potential impacts to Juniper Canyon (Location 3) would be avoided by spanning the canyon. The other areas appear to have limited resources at risk with no native sensitive species thought to occupy these areas. Like Juniper Canyon,

impacts in canal areas can be greatly minimized or completely avoided through careful structure siting and minor adjustments in alignment.

North of existing towers 56-3 and 56-4 on the Lower Monumental–McNary Transmission line (between Locations 7 and 8), a new access road would cross a small, unnamed intermittent drainage. The crossing requires a 60-inch culvert and approximately 50 tons of fill material. Potential impacts would be minimized by constructing during the dry season and implementing BMPs and mitigation measures.

Natural Gas Pipeline

As discussed for the water pipeline, there are no fish habitats within or adjacent to the proposed pipeline, hence, no impacts to fish would result from its construction.

3.7.2.2 Operation and Maintenance

Generation Plant

No impacts to fish or fish habitat would result from the operation of the Wallula Power Project. Water used during power plant operations is currently used for agricultural irrigation. Therefore no net loss of Columbia River water would occur. There may be a net increase in water for fish through the reduction in average agricultural use and potential increase of inflow to the Columbia River and Walla Walla River. These increases would come from the project commitment to purchase water rights, to mitigate for the withdrawal of cooling water, and to revegetate approximately 145 acres of riparian habitat along the Walla Walla River. If the applicant commits to retire these water rights at the end of the project life, further increase would occur.

No wastewater discharges to the Columbia River would occur since the project is being designed with a zero discharge system. As described in Chapter 2, plant cooling wastewater would be processed in a brine concentrator and evaporation ponds, eliminating potential water contamination from wastewater discharges. BMPs would be used to minimize the potential for erosion and siltation from facility operations (see Appendix A). The spill prevention, control, and countermeasures (SPCC) plan would minimize the risk and consequences of a spill.

Indirect impacts to wetlands and ponds are expected as a result of irrigation cessation on the project site, but would not result in significant impacts to fish or fish habitat. Cessation of irrigation water and pumping would potentially effect the hydrologic conditions which sustain the wetlands. Ponds C, D, and H are capable of supporting some warmwater fish at least periodically, but fish mortality is high due to bird predation and intermittent dewatering of the ponds. No permanent populations of fish exist in any of the ponds and wetlands. There is no pathway for fish from the Columbia River to voluntarily migrate to these ponds. The warmwater fish identified within the ponds during field surveys do not represent a significant fisheries resource. A net benefit to

Columbia River fisheries would result since fish entrainment from Casey Slough into the irrigation system would be eliminated.

Water Supply Pipeline

Because there are no fish habitats located with in or adjacent to the proposed pipeline corridor, operation and maintenance of the makeup water supply pipeline would have no impacts to fish or fish habitats. BMPs would be used to minimize the potential for erosion, runoff, and siltation from pipeline operations (e.g., routine maintenance and repairs).

Transmission Line and Associated Facilities

Operation and maintenance of the transmission line and substation has the potential to impact fisheries if erosion of roads or cleared areas at the base of towers transports sediment to streams or wetlands. The potential for these impacts is considered low since regular maintenance would occur to prevent erosion, culvert problems, and other potential impacts to fish habitat.

Natural Gas Pipeline

As for the water pipeline, because there are no fish habitats located within or adjacent to the proposed pipeline corridor, operation and maintenance of the gas pipeline would have no impacts to fish or fish habitats. BMPs would be used to minimize the potential for erosion, runoff, and siltation from pipeline operations (e.g., routine maintenance and repairs).

3.7.3 Impacts of Alternatives

3.7.3.1 Alternative Tower Height and Longer Span Design

Fisheries impacts from this alternative would be similar if not slightly less due to reduced erosion potential.

3.7.3.2 Alternative Alignment near McNary Substation

There is no difference in impacts to fisheries between these two options.

3.7.1.1 No Action Alternative

Under the No Action Alternative, the proposed power plant, pipelines, transmission line, and substation would not be built. The potential entrainment and incidental take of threatened and endangered or sensitive fish species through the unscreened irrigation pumps would continue (until the intakes are screened) but the potential impacts from the

proposed transmission line would not occur. Existing withdrawals from the Columbia and Walla Walla Rivers would continue.

3.7.4 Mitigation Measures

The mitigation measures listed in Appendix A and described earlier would be protective of fish and fish habitats. Therefore, no additional mitigation measures would be necessary.

3.7.5 Significant Unavoidable Adverse Impacts

No significant unavoidable impacts to fish and fish habitats would occur due to construction and operation of the proposed project.